

REMARKS

I. STATUS OF THE CLAIMS

Claims 13, 17, 35 and 39 are canceled herein.

In view of the above, it is respectfully submitted that claims 1-12, 14-16, 18-34, 36-38 and 40-60 are currently pending. Of these, claims 3, 5, 6, 11, 12, 25, 27, 28, 33 and 34 are "objected to".

II. REJECTIONS UNDER 35 U.S.C. § 103(a)

Various claims are rejected as unpatentable over Puschell (U.S. Patent 5,444,528), either singly or in various combinations, with U.S. Patent 5,452,314 to Aronson; U.S. Patent 5,002,349 to Cheung; and U.S. Patent 5,452,314 to Robinson.

Claim 45 recites an apparatus comprising (a) an acoustic optical tunable filter (AOTF) receiving a wavelength division multiplexed (WDM) light and, in accordance with a radio frequency (RF) signal applied to the AOTF, outputting first and second lights, the first light including at least one wavelength of the WDM light selected in accordance with the applied RF signal, and the second light including wavelengths of the WDM light other than the selected at least one wavelength; and (b) a controller controlling the applied RF signal so that the selected at least one wavelength is selected in accordance with a detected intensity of the first light.

Therefore, claim 45 specifically recites that a WDM light is received, and that first and second lights are output by the AOTF, where the first light includes at least one wavelength of the WDM light selected in accordance with a RF signal applied to the AOTF, and the second light includes wavelengths of the WDM light other than the selected at least one wavelength.

Puschell discloses the use of an AOTF. However, Puschell does not relate to the use of an AOTF with a WDM light. Instead, in Puschell, a light source 10 is a discrete light source that generates broadband light. See, for example, column 4, lines 37-40, of Puschell. Light source 10 does not generate WDM light, and the AOTF of Puschell does not receive or process WDM light.

Moreover, Puschell is directed to detecting the spectrum of a given substance or the spectra for a plurality of different given substances. See, for example, column 6, lines 23-36, of Puschell. Therefore, if the light provided to the AOTF of Puschell was WDM light, it is respectfully submitted that the AOTF would not work for the intended purpose of Puschell.

Moreover, in Puschell, microcomputer 37 controls the AOTF tuner 38 to diffract light into a plurality of distinct beams having different predetermined diffraction orders. These beams have different wavelength ranges that include wavelengths for a given substance. This allows Puschell to detect and measure concentrations of a large number of different given substances. See, for example column 6, lines 23-36, of Puschell.

Puschell does not disclose or suggest the use of an AOTF *to select at least one wavelength of a WDM light* as recited, for example, in claim 45.

On page 9 of the Office Action, the Examiner asserts that the claims recite an "intended use". However, claim 45 specifically recites "receiving" a WDM light, and "outputting" first and second lights. It is respectfully submitted that such recitations are not an "intended use".

Therefore, it is respectfully submitted that the present invention as recited in claim 45 is clearly patentable over Puschell.

The above comments are specifically directed to claim 45. However, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over the cited references. Please note that various other claims are amended to clarify that the AOTF receives a WDM light, and to eliminate various other language that might read as an "intended use".

Further, it is respectfully submitted that nothing was cited or has been found in the secondary references of Aronson, Robinson or Cheung suggesting modification of Puschell to overcome the deficiencies discussed above.

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Claim 8 is amended to recite an optical amplifier connected to an optical input side of said AOTF, wherein said radio-frequency signal controlling means has a calculating means that calculates a relationship between the selected-wavelength and the radio-frequency, by utilizing the output of the optical spectrum analyzer at a time the radio-frequency signal with the known frequency is applied to the AOTF and utilizing a characteristic of amplified spontaneous emission light generated at the optical amplifier.

Support for the amendments is found, for example, on page 23, line 7, through page 25, line 2, of the specification.

Puschell does not disclose or suggest these features.

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Claim 14 is amended to recite second radio-frequency signal applying means, *provided*

independently from the first radio-frequency signal applying means, for applying a second radio-frequency signal independent from said first radio-frequency applying means to a second optical waveguide for propagating the TE mode light branched by said first polarizing means, and radio-frequency signal generating means for generating said first and second radio-frequency signals independent of each other.

Support for the amendments is found, for example, on page 62, line 5, through page 68, line 11, of the specification. See also FIG. 19 of the present application.

These features in claim 14 are significantly different than that shown, for example, in FIG. 6 of Cheung.

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In view of the above, it is respectfully submitted that the rejections are overcome.

III. CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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October 5, 2006

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